

FUTURE UNIVERSITY IN EGYPT
FACULTY OF COMPUTERS AND INFORMATION TECHNOLOGY

Department: Computer Science / Cyber Security

Course Name: Selected topics in CS-1

Course Code: CS467

Instructor: Dr. Hanaa Bayomi

Dr. Heba Mohsen

Time Allowed: 20 min

Total Marks: 10

Semester: Fall 2025

Assignment 1

Q1) Assume the following data

Name	Give Birth	Can Fly	Live in Water	Have Legs	Class
human	yes	no	no	yes	mammals
python	no	no	no	no	non-mammals
salmon	no	no	yes	no	non-mammals
whale	yes	no	yes	no	mammals
frog	no	no	sometimes	yes	non-mammals
komodo	no	no	no	yes	non-mammals
bat	yes	yes	no	yes	mammals
pigeon	no	yes	no	yes	non-mammals
cat	yes	no	no	yes	mammals
leopard shark	yes	no	yes	no	non-mammals
turtle	no	no	sometimes	yes	non-mammals
penguin	no	no	sometimes	yes	non-mammals
porcupine	yes	no	no	yes	mammals
eel	no	no	yes	no	non-mammals
salamander	no	no	sometimes	yes	non-mammals
gila monster	no	no	no	yes	non-mammals
platypus	no	no	no	yes	mammals
owl	no	yes	no	yes	non-mammals
dolphin	yes	no	yes	no	mammals
eagle	no	yes	no	yes	non-mammals

a) Construct a parametric classifier using Naïve byes to predict whether this person with a new instance

X= (Given Birth= "Yes", Can Fly= "no", Live in water = "Yes", Have legs="no") Will be mammals or non-mammals.

b) Build decision tree to classify to predict whether this person with a new instance

X= (Given Birth= "Yes", Can Fly= "no", Live in water = "Yes", Have legs="no") Will be mammals or non-mammals.